

Contents

Letters to the Editor

Sundman's inequality and zero velocity hypersurfaces in the general <i>N</i> -body problem <i>Muller, J.M.</i>	L1
VLA observations of three high IR-luminosity IRAS galaxies <i>Karoji, H., Dennefeld, M., Ukita, N.</i>	L3
The spatial extent of heated dust around MWC 349 <i>Leinert, C.</i>	L6
The Mg II absorption system in the QSO PKS 2128-12: a galaxy disc/halo with a radius of 65 kpc <i>Bergeron, J.</i>	L8
The relative importance of optical and chemical pumping of cometary OH <i>Piehler, G., Kegel, W.H.</i>	L13
The first near-UV observation of P/Halley <i>Festou, M.C., Arpigny, C., Bertaux, J.L., Carey, W., Danks, T., Gilmozzi, R., Hughes, D.W., Ip, W., Patriarchi, P., Tozzi, G.P., Wallis, M.K., Zarnecki, J.</i>	L17

Extragalactic astronomy

A photometric determination of the metal content for F-G type supergiants in the Large Magellanic Cloud <i>van Genderen, A.M., van Driel, W., Greidanus, H.</i>	72
NGC 4038/39: interacting spiral galaxies with enhanced extended radio emission <i>Hummel, E., van der Hulst, J.M.</i>	151
NGC 4410 a/b: a strong radio source associated with interacting galaxies <i>Hummel, E., Kotanyi, C.G., van Gorkom, J.H.</i>	161
H_2O and OH maser emission from bright IRAS galaxies <i>Henkel, C., Wouterloot, J.G.A., Bally, J.</i>	193
A color dependence in the distance moduli derived from the <i>B</i> and <i>H</i> band Tully-Fisher relations <i>Giraud, E.H.</i>	283
Extinction and reddening of HII regions in the Large Magellanic Cloud <i>Caplan, J., Deharveng, L.</i>	297
(RN) VV 172: An effect of gravitational amplification by a massive halo? <i>Hammer, F., Nottale, L.</i>	420

Galactic structure and dynamics

Stellar dynamics of spiral galaxies: nonlinear effects at the 4/1 resonance <i>Contopoulos, G., Grosbol, P.</i>	11
Near infrared stellar counts and a model of galactic distribution <i>Garzon, F., Sanchez-Magro, C., Prieto, M.</i>	63

Formation, structure and evolution of stars

Observational implications of the explosion of white dwarfs <i>Lopez, R., Isern, J., Canal, R., Labay, J.</i>	1
HD 47147: a small-amplitude extreme metal-poor RRab pulsating variable <i>Grenon, M., Waelkens, C.</i>	24
The eclipsing system ER Orionis <i>Rovithis, P., Rovithis-Livaniou, H.</i>	46
The minimum orbital period for ultra-compact binaries with helium burning secondaries <i>Savonije, G.J., de Kool, M., van den Heuvel, E.P.J.</i>	51
ON2: a complex star formation region <i>Matthews, N., Andersson, M., Macdonald, G.H.</i>	99
Intermediate mass stars undergoing a very hot phase: Can we measure their temperatures? <i>Stasińska, G., Tylenda, R.</i>	137
Rotational and tidal perturbations of linear isentropic oscillations of a gaseous star <i>Martens, L., Smeysters, P.</i>	211

Stellar atmospheres

The atmosphere of subluminous B stars. II. Analysis of 10 helium poor subdwarfs and the birthrate of sdB stars <i>Heber, U.</i>	33
High-resolution spectra of "normal" A stars: evidence for compositional differences <i>Holweger, H., Gigas, D., Steffen, M.</i>	58
Evolutionary effects on the surface abundances of an early-type supergiant <i>Lennon, D.J., Dufton, P.L.</i>	79
The density structure of the wind of P Cygni (B1 Ia ⁺) <i>Waters, L.B.F.M., Wesselius, P.R.</i>	104

The chemical composition of the young open cluster NGC 6611		Principal heating sources of dust in the galactic disk	
<i>Brown, P.J.F., Dufton, P.L., Lennon, D.J., Keenan, F.P., Kilkenny, D.</i>	113	<i>Cox, P., Krügel, E., Mezger, P.G.</i>	380
The chemical composition of a G0 Ib star in the Small Magellanic Cloud		Abundances in the planetary nebula NGC 6153	
<i>Thévenin, F., Foy, R.</i>	145	<i>Pottasch, S.R., Dennefeld, M., Mo Jing-er</i>	397
Non-unique solutions to the stellar atmosphere problem		Deuterium and the local interstellar cloud(s?)	
<i>Muchmore, D.</i>	172	<i>Vidal-Madjar, A., Ferlet, R., Gry, C., Lallement, R.</i>	407
CD-24°9052: a new bright and helium-rich subdwarf O star		The Sun	
<i>Kilkenny, D., Heber, U., Hunger, K.</i>	175	Differential rotation of sunspot groups in the period from 1874 through 1976 and changes of the rotation velocity within the solar cycle	
The evaporation of pre-existing grains around supernovae		<i>Balthasar, H., Vázquez, M., Wöhl, H.</i>	87
<i>Pearce, G., Mayes, A.J.</i>	291	Oscillations of the Sun's chromosphere. IV. Temporal evolution of the H α profile	
The broad λ -5200 continuum depression in the CP star HD 126515		<i>Kneer, F., von Uexküll, M.</i>	178
<i>Hensberge, H., Maitzen, H.M., Catalano, F.A., Schneider, H., Pavlovski, K., Weiss, W.W.</i>	314	Some solar cycle phenomena related to the geomagnetic activity from 1868 to 1980. II. High velocity wind streams and cyclical behaviour of poloidal field	
Low-resolution IUE observations of four unreddened, 11 th magnitude B stars at high galactic latitudes		<i>Simon, P.A., Legrand, J.-P.</i>	227
<i>Tobin, W.</i>	326	Broadening of soft X-ray lines during the impulsive phase of solar flares: Random or directed mass motions?	
Observations of early-type stars at high galactic latitudes		<i>Doyle, J.G., Bentley, R.D.</i>	278
<i>Keenan, F.P., Brown, P.J.F., Lennon, D.J.</i>	333	The sharp decrease of Everhard effect and magnetic field at the outer sunspot border	
Studies of the Chamaeleon star-forming region. II. The pre-main-sequence stars HD 97048 and HD 97300		<i>Wiehr, E., Stellmacher, G., Knölker, M., Grosser, H.</i>	402
<i>Thé, P.S., Wesselius, P.R., Tjin A Djie, H.R.E., Steenman, H.</i>	347	(RN) Further atomic calculations for FeXXIII	
Metal abundances in helium-rich white dwarf atmospheres		<i>Bhatia, A.K., Mason, H.E.</i>	413
<i>Zeidler-K.T., E.-M., Weidemann, V., Koester, D.</i>	356	(RN) Theoretical intensity ratios for the X-ray lines from CaXV	
Metallicity among A and F giant stars		<i>Bhatia, A.K., Mason, H.E.</i>	417
<i>Hauck, B.</i>	371	The solar system	
(RN) Periodic optical line intensity variations in X Persei		(RN) Determination of the $^{12}\text{C}/^{13}\text{C}$ and $^{16}\text{O}/^{18}\text{O}$ ratio in the Martian atmosphere by 10 micron heterodyne spectroscopy	
<i>Apparao, K.M.V., Tarafdar, S.P.</i>	423	<i>Schrey, U., Rothermel, H., Käufl, H.U., Drapatz, S.</i>	200
Diffuse matter in space (including HII regions and planetary nebulae)		Celestial mechanics and astrometry	
The M 17 complex in the light of the near infrared line [S III] λ 9531		The nongravitational motion of comet P/Harrington and P/du Toit-Neujmin-Delporte	
<i>Hippelein, H.H., Goudis, C.</i>	6	<i>Forti, G.</i>	169
The hydrodynamics of clouds overtaken by supernova remnants. I. Cloud crushing phenomena		An accurate representation of the motion of Pluto	
<i>Tenorio-Tagle, G., Rózyczka, M.</i>	120	<i>Goffin, E., Meeus, J., Steyaert, C.</i>	323
Cyanoacetylene in the Sgr A molecular clouds		Physical and chemical processes	
<i>Walmsley, C.M., Güsten, R., Angerhofer, P., Churchwell, E., Mundy, L.</i>	129	(RN) Temperature and density determination from SiIII lines	
Multifrequency radio continuum observations of extended galactic objects. I. Nine objects from the 2695 MHz Effelsberg galactic plane survey		<i>Nussbaumer, H.</i>	205
<i>Reich, W., Fürst, E., Reich, P., Sofue, Y., Handa, T.</i>	185	Magnetization effects in an incoherent synchrotron source	
High resolution measurements of cyanoacetylene in dark clouds		<i>Singal, A.K.</i>	242
<i>Sorochenko, R.L., Tolmachev, A.M., Winnewisser, G.</i>	237	The s-process branching at ^{85}Kr	
Observations of a high-excitation transition of SO in galactic HII regions		<i>Walter, G., Beer, H., Käppeler, F., Penzhorn, R.-D.</i>	247
<i>Watt, G.D., Millar, T.J., White, G.J., Harten, R.H.</i>	339		

Influence of ion-atom collisions on the absorption of radiation <i>Mihajlov, A.A., Dimitrijević, M.S.</i>	319	Comparison between <i>UBV</i> – and <i>RGU</i> – photometrically determined space density functions in a starfield close to the galactic centre (SA 133) <i>Fenkert, R., Topaktas, L., Boydag, S., Kandemir, G.</i>	425
Sporadic acceleration of cosmic rays <i>Cowsik, R.</i>	344	Optical variability of Seyfert nuclei. I. VBLUW photometry <i>de Ruiter, H.R., Lub, J.</i>	426
Instruments, data processing, and computational methods			
Noise and astrometric precision. I. Detection noises (Text in French) <i>Gay, J., Pochet, J.M.</i>	256	Five-colour photometry of early-type stars in the direction of galactic X-ray sources <i>van Paradijs, J., van Amerongen, S., Damen, E., van der Woerd, H.</i>	426
Noise and astrometric precision. II. Atmospheric effects (Text in French) <i>Gay, J., Pochet, J.M.</i>	265	Measurements of Balmer emission line profiles for southern Be stars. III. New data and radial velocities <i>Dachs, J., Hanuschik, R., Kaiser, D., Ballereau, D., Bouchet, P., Kiehling, R., Kozok, J., Rudolph, R., Schlosser, W.</i>	426
Abstracts of articles which have been published in A. & A. Suppl. Ser. 63, No. 1		A collection of Galilean satellite eclipse observations, 1652–1983: II <i>Lieske, J.H.</i>	427
Quasar candidates in the field of SA 94 ($2^{\text{h}}53^{\text{m}}$, $+0^{\circ}20'$) <i>Barbieri, C., Cristiani, S.</i>	425	Catalogue of dark nebulae and globules for galactic longitudes 240 to 360 degrees <i>Feitzinger, J.V., Stüwe, J.A.</i>	427
A catalogue of southern dark clouds <i>Hartley, M., Manchester, R.N., Smith, R.M., Tritton, S.B., Goss, W.M.</i>	425	Astrolabe observations of radiostars at Valinhos <i>Clauzet, L.B.F., Atalla, R., Débarbat, S.</i>	427